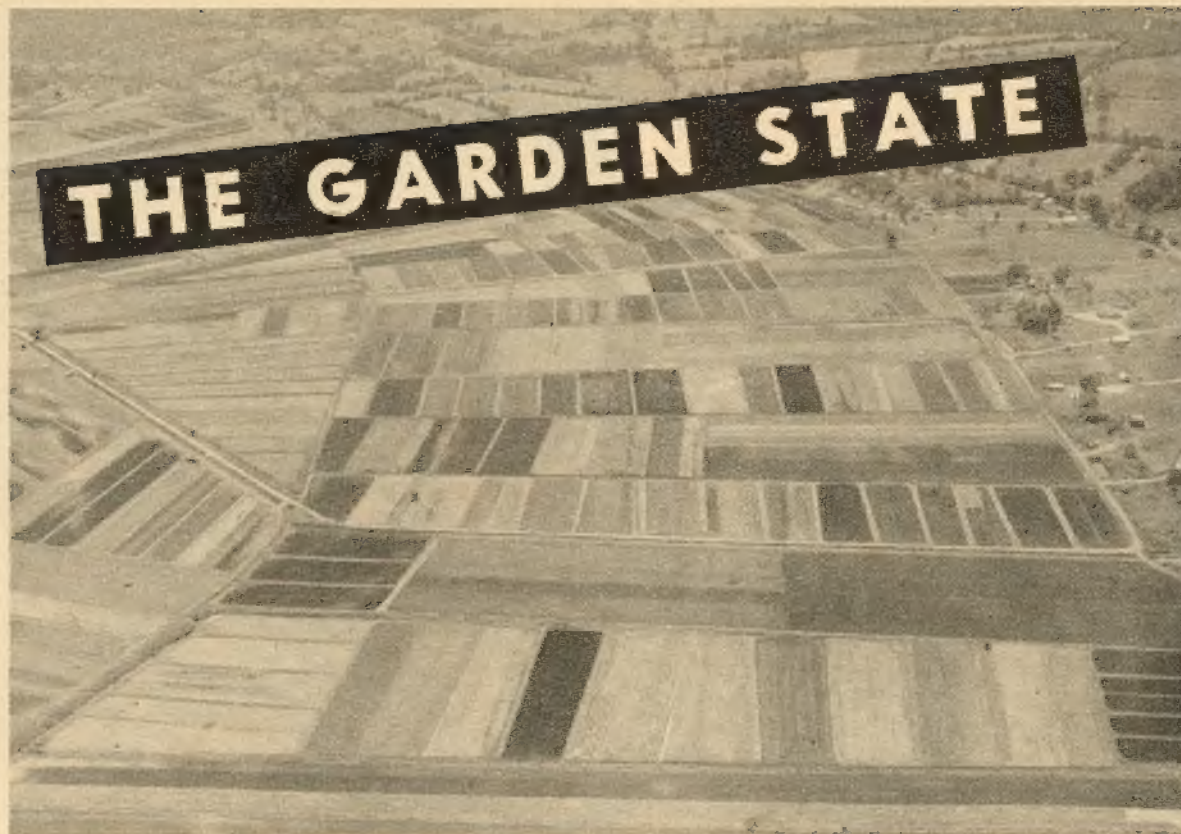




Crazy quilt pattern of mucklands at Great Meadows, Warren County, where lettuce, celery and onions grow in profusion. Exhibition of skill by worker (left), acquired from long years in field, is a necessary part of vegetable harvesting. RIGHT: Squash, one of Jersey's more than 60 vegetable varieties, being readied for market.



TILLERS OF THE SOIL

*Quality and Quantity Are Keys to the
Vegetable Prominence of New Jersey
Which Is Favored by Proximity of the
World's Best Fresh Produce Markets*

By JOHN T. CUNNINGHAM

VEGETABLES are everywhere in New Jersey — atop Schooley's Mountain, in the muck lands of Great Meadows and Paramus, in bottomlands close by the Passaic River and in vast acreages spread over South Jersey. Vegetables in New Jersey mean variety, incredible variety—from asparagus to zucchini, from sweet basil to okra, from cabbage to spinach.

More than 60 types of vegetables are grown in Garden State soils, in eloquent testimony to the fact that in this state vegetable growers plant and harvest whatever the public demands. Vegetable production is on the rise in New Jersey, too; acreage has soared from 86,000 in 1909 to more than 150,000 today (and that does not include either white or sweet potatoes).

It takes a lot of lettuce (not to mention corn, cabbage and 60-odd other

vegetables) to add up to \$60,000,000—but that's what vegetables mean annually to some 6,000 New Jersey farmers. It's no secret why the total mounts that high; close by are the best fresh produce markets in the world—plus a wide variety of vegetable-consuming "can houses."

"Can house" is a good old South Jersey term, elastic enough these days to include processors of frozen foods as well as the tin canners. Thanks to the canners, the state's vegetable growers have found their outlets about doubled in the last 40 years. Today, vegetable income is divided about 55 per cent for sales of fresh produce, 45 per cent for sales to food processors. Twenty-five years ago food processors accounted for only about 20 per cent of vegetable purchases.

IT'S more than fitting that fresh produce is still a prime item, since New Jersey vegetables have been eagerly bought in markets for more than 300 years—ever since the good Dutch

burghers of New Amsterdam bought Bergen cabbage for sauerkraut before 1700. Philadelphia Quakers loved cabbage, too; farmers in Gloucester and Salem counties knew where they were headed when they put cabbage shoots in their gardens before 1700.

Early colonists knew many vegetables (old records list more than 20 grown and eaten in New Jersey in the 18th century) but anyone who wanted to earn an extra tuppence or so grew cabbage. By 1770 every planter of consequence had some, and great fields of cabbage stretched over the south Jersey landscape. It can truly be said that in colonial days a man of wealth had plenty of cabbage.

Obviously sauerkraut didn't satisfy all New York tastes because the English had taken over the settlement from the Dutch in 1664. Soon after the Revolution, sloop after sloop laden with "pulse" (leafy green vegetables) sailed from the Jersey shore for New York docks. Changing appetites found room for North Jersey radishes, first

reported sold in 1801; for Morris County sweet corn, first listed in markets in 1825; for Gloucester turnips, important as early as 1851; for Camden County carrots, grown in quantity before the Civil War.

Bergen County gardeners gloried in their ability to grow everything bigger and better. Many Bergen farmers sent as many as three wagonloads nightly across the Hudson River to the West 14th Street Market, where hotel managers and commission merchants haggled with farmers over prices. As they sharpened their wits for the price wars, Bergen vegetable men filled their earthy talk with boasts of celery three feet long, pumpkins 80 pounds in weight, turnips three feet in diameter. If cynical commission men asked, "And how tough?" such questions merited no answer.

VEGETABLES rolled by the boxcar load from New Jersey during the Civil War to supply greens for the Union's fighting Blue. After the war, booming industry provided a two-sided impact—it brought big new factories to push farmers off their land, but it also brought the appetites of thousands upon thousands of new workers and their families to the state. Thus, demands for fresh vegetables increased

This is the fourth in a series of articles on New Jersey's highly diversified agriculture, vigorous and growing despite the constant inroads of industrial and residential development. Next week: Tomatoes (including commercial processing.)



Cutters in Morris County gathering heads of cabbage, an old Jersey commodity going back to Colonial Dutch days. LEFT: Migrant workers, part of thousands employed at harvest, weighing green beans after picking in South Jersey. BELOW: Pre-dawn picking of dew-laden sweet corn in Burlington County for same-day markets.



twofold, then fivefold, then manyfold.

Old Anglo-Saxon, Swedish and Dutch tastes had to make way for the gustatory requirements of immigrants lately come to seek fortunes in America. Italians, with their love of leafy greens and their unequalled understanding of the land, particularly influenced sales of vegetables in the city market stalls. Many of the Italians turned to vegetable growing themselves, especially in regions near Vineland, Hammonton and in parts of west Essex.

These farmers of sunny Italy adjusted themselves to New Jersey soil or, more accurately, adjusted New Jersey soil to themselves. They worked wonders with any land, be it clay or be it sandy loam. The Dutch farmers who had prospered in northeast Jersey and the Swedish farmers who had made Gloucester "the Philadelphia Garden Patch" learned much from the Vineland Italians. New York and Philadelphia market baskets found room for Italian greens, first in hesitancy, then in eagerness.

Rapidly expanding needs for vegetables, plus vastly improved transportation, caused many all-purpose farmers to switch to specialized vegetable growing. The rise of the "can house" between 1860 and 1890 accelerated

the switch; vegetable garden income rose sharply—from \$475,000 in 1850 to more than five million dollars in 1900. Town and country cooperated nicely. In the spring and winter countless trainloads of manure from city stables rolled out to the vegetable farms; in late spring, summer and early fall trainloads of vegetables rumbled from stable-enriched fields to city markets.

RAILROADS expanded the farmer's market horizons greatly. As early as 1838 the "Pea Line" (a locomotive and two freight cars) made daily trips between Camden and Amboy to accommodate the green gardens of the central Jersey hinterlands. Within three years the "line" hauled as many as 16 carloads of produce daily—including on one memorable occasion 30 tons of green corn.

Refrigerated cars, introduced in the 1880s, brought even Boston and Washington close to the field of south Jersey. One Burlington County farmer, for example, wrote in 1895 that New York had become only his third best market—behind Newark and Boston. He didn't even mention Philadelphia, figuring possibly that what Newark, Boston or New York wouldn't buy, he could easily unload on Dock St.

A pleasant picture, these new-found

markets, except for one thing—refrigerated cars played no favorites. They hauled south Jersey greens to Boston, true; they also hauled Midwest vegetables to the East. No longer could a New Jersey farmer unload his surplus vegetables nearby; he had to fight for what had been his uncontested own these many decades.

A vegetable spokesman warned his fellows at the annual meeting of the New Jersey Horticultural Society in 1903 that the old careless ways had to be abandoned. "Success in vegetables," he said, "is due as much to packaging as to care in growing." A bit of a radical, that grower, and he went on:

"The time has long since passed when we can grow a crop and gather it as it runs and haul it to market in a dirty package, poorly assorted—or worse, carefully assorted, so that perfect specimens are saved for the top of the basket."

FARMERS themselves didn't hanker much for green vegetables; a Horticultural Society speaker in 1884 told the tillers of the soil they should vary their own menus with green vegetables—"so that the pork and potatoes of today won't give way to the potatoes and pork of tomorrow and the pork and potatoes of the day after tomorrow." Few heeded him; a man

in those days needed calories as he plowed the back 40, and his lady cared so little for tape measure statistics that she even embellished ample nature with a bustle.

But times were changing. By 1910 the can opener had become a national symbol and medicine men who urged more green vegetables in the diet were no longer looked upon as charlatans. The 20th century has seen the vegetable come into its own, in sharply increased demands for fresh vegetables and in the ever-mounting demands of the canneries and frozen food houses.

Nevertheless, New Jersey still had only two important vegetable areas until World War I, easily delineated by swinging 20-mile arcs around New York and Philadelphia—or just about as far as a pair of steaming horses could pull a groaning wagon in a day. Railroad cars reached well out into the country, but in total volume, what they hauled didn't touch the fresh produce grown for nearby markets.

OLDTIMERS in south Jersey can still remember ceaseless strings of loaded wagons rolling through every village within 10 miles of Camden, headed for Dock St. They rolled night and day through the summer, six days a week;

(Continued on Following Page)



Harvesting lima beans is a highly mechanized operation at Seabrook Farms in Cumberland County. But young spinach still calls for painstaking hand labor such as wheel-hoeing (left) on Maier Bros. Pine Brook Farms at Budd Lake.

JERSEY VEGETABLES

(Continued from Preceding Page)

the sounds of vegetable wagons trundling over cobblestone streets through the darkened hours became a familiar summer sound. In 1901 1,500 vegetable wagons used the Camden ferry daily—hauling 150,000 baskets of New Jersey produce into Philadelphia every day.

Vegetable growing settled into a pleasant pattern of small garden patches within the twin 20-mile arcs. Farmers worked and reworked their tiny acreages—seldom more than 20 acres—raising astounding volumes of leaves and roots for nearby consumption. They beat the Western competition by getting to market first with the most; "Jersey" vegetables in New York and Philadelphia carried connotations of dew on crisp lettuce leaves, of cabbage as tender as spring rain.

The farmer took what came, varying his input so that regardless of the vagaries of nature he always had some output. He grew some vegetables which thrived on dry weather, some which loved soggy weather, and thus assured himself that he wouldn't fail because of extreme drought or extreme raininess. He had good reason to worry about the elements—in the summer of 1894, as an extreme example, New Jersey had almost no rain. That year Cumberland County soil crumbled to dust in 111 solid days of drought from May 1 to August 19.

THAT same year a 13-year-old dreamer, christened Charles F. Seabrook after his birth on a 57-acre farm near Bridgeton in 1881, made his schoolmates chuckle. "C.F. says some day he'll make it rain when the sky is blue," they laughed. Out in Ohio, meantime, others laughed at one C. W. Skinner as he began experimenting with irrigation nozzles in the early 1890s.

Skinner came to live in Salem County in 1910, and it didn't take long for the paths of C.W. and C.F. to cross. Within a year—in 1911—Skinner's overhead irrigation systems began to sprinkle on ever-broadening Seabrook acres. C. F. Seabrook had a green touch and a golden mind; by 1917 he owned 3,000 Cumberland County acres, by 1918 he had 200 acres under irrigation—far and away the largest area in the country to get rain even when the skies were blue.

Whereas his father had once sold door-to-door and store-to-store, young Seabrook sent trainloads of fresh produce out on 400-mile journeys to Boston, Pittsburgh and Washington. All this magnificence became but nothing, however, after 1933—the year Seabrook made his first pack of frozen food. No longer could the 7,500 acres of Seabrook-owned land meet the needs.

Neighbor farmers, from Deepwater to Cape May Court House, responded to Seabrook's invitation to grow vegetables for him under contract. They didn't exactly plunge at first (south Jersey farmers by tradition never plunge). The first year only six growers toted their vegetables to Seabrook; by 1954 that number had jumped to more than 1,000 farmers with a total area of close to 35,000 acres. Seabrook-owned land at the time expanded to 19,000 acres.

NO vegetable enterprise in the United States is bigger than Seabrook Farms, no farm in the nation is more highly mechanized. More than 200 tractors work Seabrook's own acres, more than 500 trucks are needed to haul crops and farm equipment. Scores of specially built machines dig beets, pluck ears of corn, slice off spinach in the fields, flip peas and lima beans from their shells. Nearly one-third of

all vegetable acreage in New Jersey is owned or controlled by the Cumberland County enterprise. Farmers in a dozen counties sell to "C.F.," whose dreams have been dwarfed by reality.

Other canners compete with Seabrook, of course, but Seabrook is unique in one respect—it buys no tomatoes. Most other vegetable processors (such as Hunt & Ritters in Bridgeton, California Packing Co. in Swedesboro and Campbell's in Camden) squeeze profits from tomatoes—although they also buy big quantities of asparagus, corn and other vegetables.

The influence of Seabrook on vegetable growing in New Jersey can't be overemphasized. The company has soil and crop experts who advise the farmer as much as he desires. Seabrook supplies all seed to its growers—spending an estimated \$500,000 annually for three million pounds of seed. The 1,000 farmers who contract annually with Seabrook are a varied lot—ranging from dairy farmers with a few acres in vegetables to many growers who plant 500 to 1,000 acres in Seabrook vegetables every year.

ALTHOUGH the cannery and frozen food plant is becoming increasingly vital in New Jersey, the market gardener and the truck gardener still are as economically crisp and green as their vegetables are fresh and in demand. Fresh vegetable production hasn't declined; rather, thousands of extra acres are meeting the demands of processors.

The market gardener, by way of explanation, is the farmer who grows a wide range of vegetables and sells in nearby markets. He grows intensively, getting two or three crops from the time he plants his first lettuce in March until he cuts hardy greens in November. He specializes in such vegetables as lettuce, onions, celery, salad greens, horseradish, carrots and so on. Generally he's a small operator, often

owning only 5 to 10 acres, seldom exceeding 40 acres.

The truck gardener, on the other hand, goes in for "bigger" commodities—such as sweet corn, eggplant, pumpkins, peppers, turnips, cabbage, squash, asparagus—all of which have relatively long growing spans. Greater acreage is required for truck gardening, and truck farms up to 100 acres are not uncommon; some exceed 500 acres. Truck, by the way, has nothing to do with the means of transportation—it refers to the basic meaning of the word: bartering or peddling; hence, "truck" vegetables in the old days were vegetables for barter or for door-to-door peddling.

MARKET gardening is (and always has been) most intense in Essex, Union, Bergen, Passaic and Hudson counties. Fifty years ago this region had the unofficial title of "Salad Bowl of the United States." California and Florida greens have since become major competitors, but those five northeast counties still have vegetable prominence not much less than in their salad days.

A 1948 survey showed 527 vegetable men working about 15,000 acres in Essex, Bergen, Hudson, Passaic and Union. They grow between 60 and 70 varieties of vegetables (Essex County farmers alone grow some 59 different vegetables). Those northeast Jersey farmers use every modern method—tractors, irrigation, insecticides, fertilizers, carefully selected seed. One county agent in the area believes that no region in the country has a higher tractor-per-acre ratio than northeast Jersey. Another county agent declares that the Plenge Farm at Belleville probably produces more dollar volume per acre than any vegetable grower in the world.

The land must produce, and produce heavily, since this northeast Jersey land has potential value for industry or residential building far transcending mere farm values. Offers

for acreage in the region range up to \$10,000 per acre and higher. Parkways and turnpikes crowd in, taking land. Industry seeks farms for suburban sites. Real estate men wave checkbooks, promising more lettuce than any irrigation system could ever produce.

SOME succumb to the checkbooks, some are forced out by highway building. Usually they move elsewhere in the state—to lower Middlesex County, to Monmouth County or to Morris County, in many cases—and go right back to vegetable growing. This is by no means new; farm writers of 30 years ago noted the same trend. Some New Jersey vegetable farmers have shifted gardens as much as four times in a lifetime—from Long Island to Bergen County, for instance, then to Essex and finally on down to a spot like Cranbury in Middlesex County or near the shore in Monmouth County.

Often the small market gardener of Essex becomes a large truck gardener in Middlesex or Monmouth, producing heavily in vegetables with longer growing seasons. Frequently he seeks to carry on in the old intensive manner—and occasionally he overproduces. Ten times as much lettuce doesn't mean 10 times as much income; sometimes it can be disastrous. As the old saw says, "High farming is no remedy for low prices."

One of New Jersey's most interesting vegetable facets is the growing of celery, lettuce and onions in the black muck lands—Great Meadows in Warren County, the "Drowned Lands" in upper Sussex County, and regions near Paramus and Allendale in Bergen County.

Eighty years ago all these areas were mosquito-infested, disease-breeding marshes. Drainage programs started between 1870 and 1890 lowered water tables, revealed rich black earth unrivalled for the growing of celery, lettuce and onions. Today the muck lands continue highly valuable—and quite likely to persist, since even in home-conscious Bergen the



One of South Jersey's big spinach fields and (right) processing late spring asparagus for canning and food freezing at Seabrook Farms.



muck lands have not yet been touched by developers.

Every county in the state has a measureable vegetable industry, but the eight counties of south Jersey account for about 80 per cent of the state's entire vegetable acreage. Cumberland, ninth-ranking county nationally in vegetable acreage, is far out in front with about 39,000 acres of vegetables, followed by Gloucester, with about 22,000 acres; Burlington and Salem, each with about 18,000 acres; Monmouth, with 9,500 acres, and Atlantic, Cape May and Camden counties, each with about 5,000 acres of vegetables.

The "can houses" of south Jersey account for much of this, of course, but the processor is far from all. Burlington County, for example, with 8,000 acres of sweet corn, is one of

America's top sweet corn counties. Corn is big business in Burlington where farmers have an ear for the fresh market; hundreds of acres are picked under lights before dawn so that succulent kernels can reach city market dew-fresh and be served for dinner the same day.

Cumberland County, for all its Seabrook influence, is the state's leading lettuce, onion and pepper producer. Hundreds of acres of lettuce surround Cedarville in Cumberland, topped by irrigation systems as far as the eye can reach. More peppers than you can shake a jar of chili sauce at are produced in Cumberland and Gloucester counties—where a combined total of 4,200 acres yields about 20 per cent of all United States peppers. Nearly 30,000 acres of asparagus send their delicate green shoots from the earth every spring in Camden, Salem, Gloucester, Monmouth and Cumberland counties. Jersey "grass," as it is known to the trade, is a welcome sign of spring on tables in many Eastern homes.

THE richness of those south Jersey fields pushes New Jersey vegetable crops into top national prominence. This state ranks fifth in acres of vegetables harvested for fresh market, sixth in overall acreage of commercial vegetables (fresh and processed). In both tonnage and value of vegetables, New Jersey ranks fifth.

Individually, New Jersey vegetables hold high national rank, too. For example, the state is far out in front in late spring asparagus, is second in asparagus for processing; New Jersey leads in eggplant growing, producing about 40 per cent of all grown in the nation; the state is first in early summer cabbage and cucumbers, first in late spring lettuce, first in early summer onions, first in late summer peppers; New Jersey is second in sweet corn sold for fresh marketing, fourth in green lima beans.

Dollarwise, many New Jersey vegetables are impressive, too. Eleven va-

rieties (excluding white and sweet potatoes) go well over a million dollars annually—asparagus, lima beans, snap beans, broccoli, cabbage, sweet corn, lettuce, onions, peppers, spinach and tomatoes. A million dollars in a vegetable is a lot of green, no matter how you look at it.

New Jersey vegetable growers have a splendid advantage—they can get into market earliest with their garden yields, although the years have seen the advantage narrowing. Vegetable farmers get their produce to fresh market in three ways—through their own nine cooperative markets (dating from 1928, when markets were opened, in Cedarville and Rosenhayn), through five city markets or at roadside stands. Huge trailer trucks now power vegetables from field to where a shopper in distant cities can see them buy them the day they are picked.

QUANTITY is the key to the state's vegetable prominence; lettuce must be crisper, peppers sweeter, corn more tender, onions more tear-inducing than any shipped from far-off fields. That's the way it should be. Dutch kraut makers didn't buy New Jersey cabbage because Bergen growers were related, Philadelphia housewives didn't buy Gloucester vegetables because they felt sorry for the Swedes across the river.

Diet-conscious women didn't snap up greens grown by the Italians of Hammonton, Vineland and West Caldwell just to help these new Americans become rooted. Hotel owners by the Jersey shore didn't put south Jersey vegetables on their silvered tables out of the bigness of their hearts, nor did drivers of Model T's stop by the early shore roadside stands only to cool off their motors.

Rather, New Jersey vegetables came to grace the tables of the high and the mighty and the poor and the hungry because they were tender and reasonable. Only thus did New Jersey become the Garden State.



Bergen County's transition from agricultural to residential status in capsule form as tide of small homes creeps up on market farms.